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ABSTRACT

This study explores the relationship between students' perception of the learning process in their secondary school arts classes and seven contextual elements: (1) teachers' demographic characteristics and their attitudes; (2) students' demographic characteristics and their self-concepts; (3) the classroom environment; (4) the curricular content of the classes; (5) teachers' behaviors regarding the use of time, decision-making, and instructional practices; (6) the type and variety of class activities; and (7) the nature of student interactions with their teachers and their relationships with other students. Data from a national sample of 122 art classes in 25 secondary schools came from the 1977 project, A Study of Schooling. Classrooms were observed for an entire period at least three times using the modified form of the Stanford Research Institute's Classroom Observation Instrument. Teachers provided information by responding to a survey and interview, and the students responded to a survey which included closed and open-ended questions. Canonical correlation and regression analysis was used to relate the seven sets of variables to the student. Four sets of variables: teacher behavior; interactions and relationships; curricular content; and student characteristics accounted for the strongest correlations. Implications of the findings for the improvement of arts education are discussed. (SY)

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Arts Education in Secondary School Classrooms Factors Related to Students' Perceived Learnin

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Paper Presented at the Annual Meeting of
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Overview and Purposes

Until recently, educational research has concentrated on identifying single factors such as school resources, teachers' characteristics, teachers' methods or engaged student learning time, which influenced how much students learned in academic subjects. During the last several years, attention has turned toward exploring relationships among several elements of teaching and learning in classrooms (Doyle, 1978). Teachers' behaviors, students' behaviros, and what students learn are now viewed as being partially dependent on the way teachers and students interact with each other and with the classroom environment (Doyle, 1978; Johnson, 1981; Moos, 1979). Students are also being recognized as instrumental to how classrooms function and as important informants about the classroom environment (Weinstein, 1982). As we become more aware of the importance and contributions of students to the teaching and learning environment, the need for this type of information becomes more acute. Much remains unknown, though, about how students perceive the teaching and learning processes. Furthermore, while there have been some research efforts more recent than Jackson's (1968) directed toward exploring and understanding how classrooms function (Bossert, 1978; Blumenfeld et al, 1981; Doyle, 1979; Everhart, 1979; Mehan, 1979; Metz, 1978; and Sieber, 1979), most of the studies are still focused on the academic subjects. Little is known about teaching and learning in the arts -- creative writing, dance, drama, humanities, music and the visual arts. Therefore,

the present study was designed to generate knowledge about teaching and learning in secondary school arts classrooms that could be used to guide future research and suggest directions for change and improvement efforts in arts education.

The major purpose of this study was to explore the relationship between students' perceptions of the learning process in their secondary school arts classes and several contextual elements. These elements included: (1) teachers' demographic characteristics and their attitudes; (2) students' demographic characteristics and their self-concepts; (3) the classroom environment; (4) the curricular content of the classes; (5) teachers' behaviors regarding the use of time, decision-making and instructional practices; (6) the type and variety of class activities; and (7) the nature of students' interactions with their teachers and their relationships with other students.

The second and third purposes of the study concerned utilization of the research findings. The second purpose was to use the results of the data analyses to suggest revisions and improvements to be made in the conceptual framework which guided the study. The third purpose was to use the research findings to yield insights into how to improve the environment of arts education in the schools.

The data examined in the study were collected from a national sample of 122 arts classes in 25 secondary schools. These classes formed one part of a larger sample of elementary and secondary school classes in all of the major subject areas, which was used in a more comprehensive research project, A Study of Schooling. The larger study was undertaken in 1977 under the auspices of the Research Division of the Institute for Development of Educational Activities (I/D/E/A), directed by John I. Goodlad. A detailed and comprehensive discussion of the methodology and results of the larger study is available in Dr. Goodlad's report entitled A Place Called School (1984).

Conceptual Framework

Figure 1 represents the conceptual framework that guided the design of the study. This conceptualization of teaching and learning was suggested by a perspective which focuses on the ecology of classrooms. The specific constructs and variables included in the conceptual framework were based on the data set used in this study, and do not necessarily represent all possible elements which could 'fit' in the coneptualization.

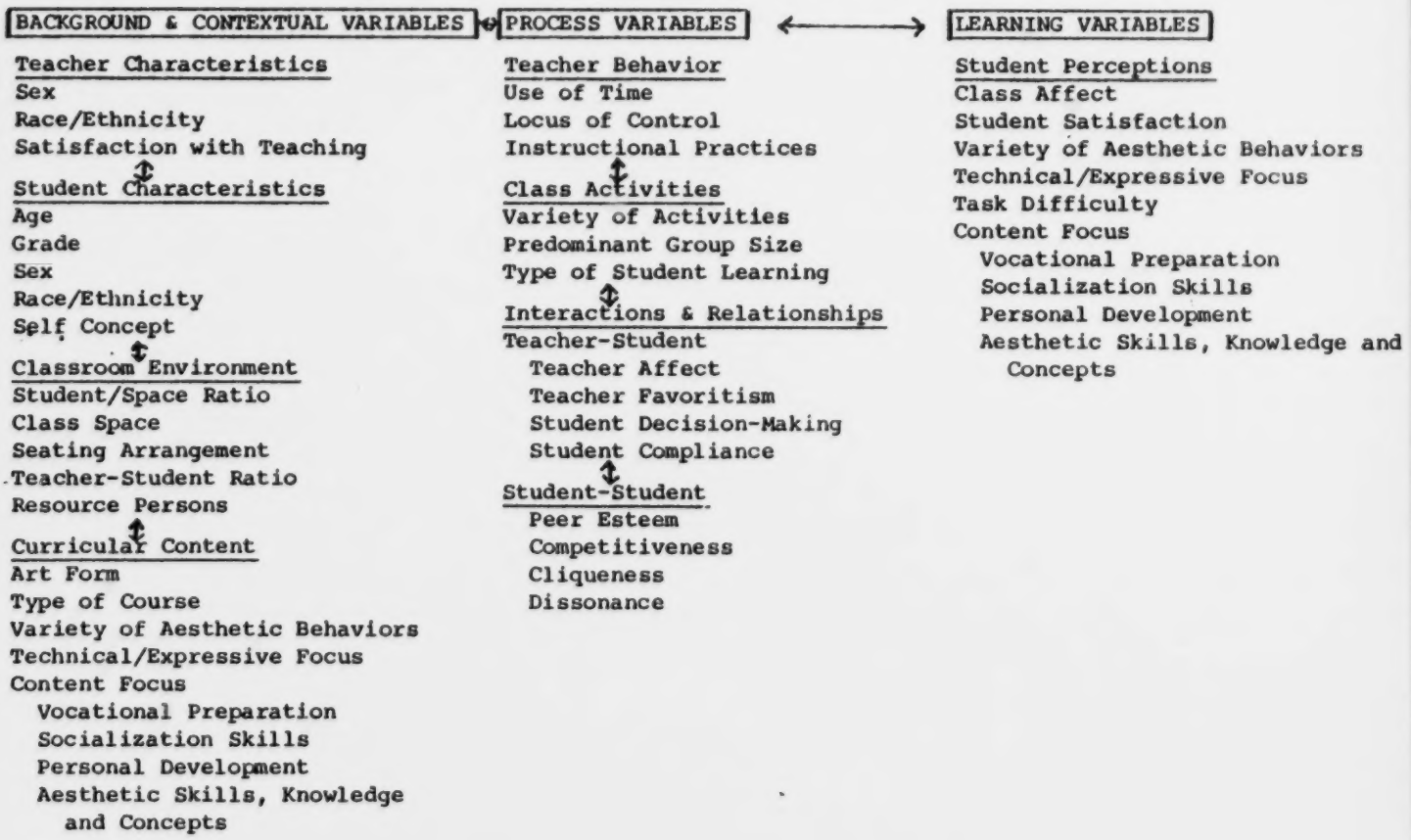
The elements in the framework were grouped into three main categories; (1) Background and Contextual Variables; (2) Process Variables; and (3) Learning Variables. While it is readily apparent from Figure 1 that the Learning Variables were based on students' perceptions, the reader should also note that several of the Process Variables were also derived from students' perceptions. The general organization of variables, admittedly, is similar to that proposed by Dunkin and Biddle (1974) in their model of classroom teaching, but the nature of the effects indicated here is more complex. It is suggested that effects are transmitted back and forth among the three categories. Thus, student learning is as likely to impact on teacher-student interactions as those alterable characteristics of teachers, such as their satisfaction with teaching, as teacher behavior is likely to influence student learning. The framework also suggests that there are multi-directional effects within each category. While the view of classroom life depicted in the coneptualization reflected (or even understated) its complexity, the study was limited in terms of the type and number of relationships that were explored.

Sample and Data Collection

The data in this study came from A Study of Schooling, which was a comprehensive and descriptive investigation of schooling in 38 schools, comprising observations in 1016 classrooms. It was

Figure 1

Conceptual Framework for Teaching and Learning in Secondary Arts Classrooms



conductd under the auspices of the Institute for the development of Educational Activities, directed by John I. Goodlad (1974). Schools were selected in triples representing a feeder pattern (one elementary school, one junior high school and one senior high school) according to their geographical location (urban, suburban or rural), student ethnicity, parent economic status and school size. A description of the demographic characteristics of the sampled schools is found in Table 1.

Data were collected from 13,719 secondary and 3,444 elementary students; 1,064 secondary and 286 elementary teachers; 8,624 parents, administrators; many other non-teaching professionals; and several types of community organizations. In addition, observations were conducted over a three-week period for three class periods in each of 895 sampled secondary school classes and for three school days for 129 sampled elementary classes. All teachers in each school were asked to complete a questionnaire, as were all students in the sampled classes. Teachers of sampled classes were also interviewed and asked to submit examples of their curricular materials. Generally, the size of each sample was large enough to warrant investigation of the data for patterns, trends and relationships.

At the elementary level, two classes were randomly selected from each grade in each sfchool. At each secondary school, a random and representative sample of course offerings in eight subjects was taken. The distribution of secondary school classes by subject area can be seen in Table 2. This study examined 54 visual art classes, 45 music classes and 23 other arts classes, yielding a total of 122 secondary school arts classes.

Instruments

Classroom Observation Schedule. The Stanford Research Institute's Classroom Observation Instrument (Stallings, 1975) was modified in three main ways: (1) it was generalized for use at both elementary and secondary schooling levels; (2) variables

Table 1

Demographic Characteristits of Schools

Schools[a]	Size[b] Elementary	Junior High	Senior High	Economic Status	Ethnicity	Location
Atwater	Small	Small	Small	Middle	White	Suburban
Bradford	Medium	Medium	Medium	Low/ Middle	White	Suburban
Crestview	Medium	Medium	Medium	Low/ Middle	White	Suburban
Dennison	Small		Small	Middle	White	Rural
Eudlid	Small	Small	Small	Middle	White	Rurla
Fairfield	Large	Medium	Medium	Low/ Middle	Mexican-American/ White	Rural
Laurel	Medium	Small	Small	Low	Black/ White	Rural
Manchester	Medium	Large	Large	Middle	Black	Urban
Newport	Large	Large	Large	Low/ Middle	Mixed	Urban
Palisades	Small	Medium	Medium	Upper/ Middle	Black/ White	Urban
Rosemont	Medium	Medium	Large	Low	Mexican-American	Urban
Vista	Large	Large	Large	Middle	White	Suburban
Woodlake	Medium	Medium	Medium	Middle	White	Suburban

[a]These are fictitious names

[b]

	Elementary	Junior High	Senior High
Large	>700	>1,000	>2,000
Medium	500-700	500-1,000	1,000-1,500
Small	<500	<500	<500

Table 2

Distribution of Sampled Secondary School Classes by Subject

Subject	Junior High/ Middle	Senior High	Total Second-ary	% of Sample
English	73	74	147	16.4%
Mathematics	70	72	142	15.9
Social Sciences	54	75	129	14.4
Science	42	65	107	12.0
Arts	44	78	122	13.6
Visual Arts	(18)	(37)	(54)	
Music	(22)	(23)	(45)	
Dance, Drama	(4)	(10)	(14)	
Humanities, Creative Writing		(9)	(9)	
Foreign Language	11	27	38	4.2
Vocational Education	49	103	152	17.1
Physical Education	25	32	57	6.2
TOTALS	368	526	894	100.0

were separated out by course content; and (3) variables were separated out by classroom contexts: instruction, behavior, routine and remainder (which we called "social"). For a detailed description of the instrument, and a discussion of the modifications made in it, see Giesen and Sirotnik (1979).

The instrument was made up of four main parts. The first, the Physical Environment Inventory, recorded seating and grouping patterns, furnishings, materials and architectural features of the classrooms. The next section, the Classroom Snapshot, recorded data about what each adult and child in the classroom was doing, the size of the groups of students, and the nature of the activities in progress. The third section, the Five Minute Interaction (FMI), used five response categories for the observer to record: Who does the action; To whom is it directed; What is done; What is the context; and How is it done. Both the Snapshot and the FMI sections were replicated four times during each observation period. The final section, the Daily Summary, afforded an overview of the space and materials available as well as the decision-making process in evidence. At the junior and senior high school levels, one full observation consisted of an entire class period. With only a few exceptions, each sampled class was observed three times.

Variables related to the use of time and instructional practices were derived from observation data about teacher-student interactions, as observed on the FMI portion of the observation schedule. Variables concerning the variety of student activities, predominant group size and the type of student learning were based on periodic descriptions of student and teacher activities (Snapshots). Finally, the following variables were taken from the less frequently recorded portions of the observation instrument (Classroom Inventory and Daily Summary): student/space ratio; seating arrangement; teacher-student ratio; resource persons; and locus of control.

Teachers. Another set of instruments was designed for teachers who provided information in three different ways: (1) they responded to closed-form questions on an optically-scanned survey; (2) they submitted examples and descriptions of their typical curriculum plans; and (3) they were interviewed by a member of the data collection team. The variables concerning teachers' sex, race/ethnicity and satisfaction with teaching were derived from the survey. The author's analysis of the written interview responses and the curriculum materials were used to form variables about the curricular content of the classes.

Students. Students responded to a survey which included closed and open-ended items. Variables based on these responses included student age, grade and sex. Scale scores from the student survey yielded variables for student self-concept and their perceptions of teachers, instructional practices, as well as teacher and student interactions and relationships. The student learning variables in this study came from the author's analysis of student responses to an open-ended question and the survey scale scores. Additionally, class lists provided by each school were used to form variables about the type of art courses sampled and students' race/ethnicity.

Analysis

Canonical correlation and regression served as the analytic technique used to relate each set of variables to student-reported learnings. This analytic method was selected because it provides descriptions and the levels of significance of the overall relationship between two sets when each set contains two or more variables. The correlations of the variables within each set, as well as the correlations between sets, are considered. The canonical correlation observed for each relationship being investigated indicates the overall strength of association between the two sets of variables. Several canonical solutions (which can never be greater than the number of variables in the smaller of the two sets)

emerge, which specify the relationships between the two sets of variables. Standardized regression weights and/or canonical loading coefficients (the product moment correlations of the variables in each set with the canonical variates) are used to interpret the relationship between the sets of variables. Darlington, et al, (1973) recommeded, though, that the loading coefficients rather than the regression weights be used to interpret the multivariate relationships.

Subprogram MANOVA from the Statistical Package for the Social Sciences (SPSS) was used to perform the canonical correlation analysis. The focus of this study was the classroom which, therefore, served as the unit of analysis. Teacher and student data aggregated at the classroom level were used to perform the analysis. Canonical correlations between each of the seven sets of variables described above, and student reported learnings, were performed overall 122 secondary arts classes.

Results

The following summary of results discusses the findings for each set of contextual variables. The sets of Teacher Characteristic Variables, Classroom Environment Variables and Class Activities Variables, were dropped from this discussion because no significant canonical correlations were observed.

Student Characteristics. In the following discussion, and in all subsequent sections reporting the research results, only those variables with loading coefficients of .30 or higher (or -.30 or lower) will be reported. Coefficients less than .30 represent less than ten percent of the variance between the variable and the canonical variate and can, therefore, be judged to be of little meaningful importance.

When the Student Characteristic Variables were regressed on the Student Learning Variables, two significant canonical correlations resulted (R=.81 and R=.60, Table 3). These high correlations

Table 3

Student Characteristics:
Significant Canonical Correlations
and
Loading Coefficients
Overall Arts Classes

	Student Characteristic Variables	Loadings	Student Learning Variables	Loadings
1st Canonical	Sex	.42	Task Difficulty	.87
R = .81	Self Concept	-.61	Student Satisfaction	-.36
R^2 = .66	Age	-.66	Variety of Aesthetic Behaviors	-.42
Sig. = .000	Grade	-.75		
2nd Canonical	Sex	.79	Content Focus on Vocational	.70
R = .60	Self Concept	.38	Class Affect	-.30
R^2 = .36	Race/Ethnicity	-.51		
Sig. - .030				

suggest that student characteristics were, indeed, important factors in predicting students' reactions to what they learned in their arts classes. The first and second variates in the overall analysis represented 66 percent and 36 percent, respectively, of the shared variance in Student Characteristic and Student Learning Variables. The loadings for the first variate indicated that in lower grade classes with a higher percentage of students who were younger and had lower self-concept scores, students also perceived their work to be more difficult, reported participating in a limited variety of aesthetic activities, and were less satisfied. The second variate described classes that were predominantly male, had fewer causasian pupils, and had somewhat positive student self-concept scores. Students in these classes tended to participate in more vocationally oriented activities and had somewhat lower class affect scores.

Curricular Content. The similarity between many of the Curricular Content and Student Learning Variables probably contributed to the large number of significant canonical correlations that emerged from these analyses (Table 4). Despite the large number of significant canonical correlations, the magnitude of the correlations was not the highest of the analyses. Nevertheless, the first variate for each canonical analysis accounted for more than fifty percent of the shared variance in the two sets of variables.

The parallel nature of six of the Curricular Content Variables and Student Learning Variables (variety of aesthetic behaviors, technical/expressive focus, content of focus on vocational preparation, socialization skills, personal development, or aesthetic skills, knowledge and concepts) also made it possible to compare teachers' and students' perceptions of several aspects of class content. There were several cases of similar loading coefficients for all but one of these variables (aesthetic skills, knowledge and concepts). The highest loading coefficients were for content focus on vocational preparation and technical/expressive

Table 4

Curricular Content:
Significant Canonical Correlations and Loading Coefficients
Overall All Arts Classes

	Curricular Content Variables	Loadings	Student Learning Variables	Loadings
1st Canonical R = .73	Content Focus on Vocational	.67	Content Focus on Vocational	.62
R^2 = .53	Content Focus on Aesthetics	-.30	Student Satisfaction	-.34
Sig. = .000			Class Affect	-.45
	Content Focus on Personal	-.31	Content Focus on Personal	-.53
	Art Form	-.42	Variety of Aesthetic Behaviors	-.56
	Variety of Aesthetic Behaviors	-.43		
2nd Canonical R = .61	Content Focus on Social	.30	Content Focus on Personal	-.40
R^2 = .37	Technical/Expressive Focus	-.44	Technical/Expressive Focus	-.43
Sig. = .000	Variety of Aesthetic Behaviors	-.56	Variety of Aesthetic Behaviors	-.50
	Content Focus on Vocational	-.69	Content Focus on Vocational	-.56
3rd Canonical R = .53	Variety of Aesthetics	-.30	Student Satisfaction	.33
R^2 = .28	Type of Course	-.79	Variety of Aesthetic Behaviors	-.31
Sig. = .000			Task Difficulty	-.57
4th Canonical R = .50	Art Form	.78	Variety of Aesthetic Behaviors	.40
R^2 = .25	Type of Course	.34	Content Focus on Social	.38
Sig. = .000	Content Focus on Social	.32		
	Technical/Expressive Focus	-.46		
5th Canonical R = .42	Content Focus on Social	.74	Content Focus on Social	.75
R^2 = .17	Type of Course	-.35	Class Affect	.65
Sig. = .005	Content Focus on Aesthetic	-.71	Student Satisfaction	.61
			Content Focus on Vocational	.48
			Content Focus on Personal	.42
			Technical/Expressive Focus	.37

focus. It appears, then, that excluding the one variable mentioned above, there was a positive and consistent relationship between teachers' and students' perceptions of the intended and experienced curriculum. It is disturbing that the variable concerning a focus on aesthetic content did not yield similar loading coefficients for the sets of Curricular Content Variables and Student Learning Variables.

Teacher Behavior. The first canonical correlation for this set of variables was very high (R=.95) and, in fact, was the highest for any variate resulting from the overall analysis (see Table 5). It is clear that in classes where the teachers received lower scores concerning knowledge of results, teacher clarity and class organization, students had higher task difficulty scores, but lower class affect and student satisfaction scores. Students in these classes also reported a greater lack of emphasis on aesthetic skills and concepts and personal development, as well as a limited variety of aesthetic behaviors.

The second significant correlation (R=.77) indicated that students had lower class affect scores and perceived a greater lack of emphasis on socialization and vocational preparation in classes where teachers were observed to have more control over activities and space.

Interactions and Relationships. The first significant canonical correlation for this set of variables (R=.89) was the second highest of the overall analyses. Like the highest correlation described above(see Table 5), the loadings for this first variate revealted higher student scores for task difficulty and lower scores for student satisfaction and class affect (see Table 6). Students also reported participating in fewer aesthetic behaviors having a single versus integrated focus on technique and expression, as well as a greater lack of emphasis on social and personal development. Additionally, in these classes teachers were perceived by the students as showing more favoritism and as being lower in affect,

Table 5

Teacher Behavior
Significant Canonical Correlations and Loading Coefficients
Overall Arts Classes

	Teacher Behavior Variables	Loadings	Student Learning Variables	Loadings
1st Canonical	Knowledge		Difficulty	
R = .95	of Results	-.83	of Task	.72
R^2 = .90	Teacher		Technical/Ex-	
Sig. = .000	Clarity	-.91	pressive Focus	-.35
	Organization	-.95	Content Focus on Aesthetic	-.39
			Content Focus on Personal	-.43
			Variety of Aesthetic Behavior	-.52
			Class Affect	-.66
			Student Satisfaction	-.96
2nd Canonical	Control of		Class Affect	-.37
R = .77	Activities	-.34	Content Focus	
R^2 = .69	Control of		on Socialization	-.39
Sig. = .033	Space	-.36	Content Focus on Vocational	-.80

Table 6

Interactions and Relationships:
Significant Canonical Correlations and Loading Coefficients
Overall Arts Classes

	Interaction/ Relationship Variables	Loadings	Student Learning Variables	Loadings
1st Canonical	Teacher Favoritism	.70	Difficulty of Task	.66
$R = .89$	Class Dissonance	.58	Content Focus on Socialization	-.35
$R^2 = .79$	Student Cliqueness	.36		
Sig. = .000	Student Decision Making	-.59	Variety of Aesthetic Behavior	-.39
	Peer Esteem	-.64	Technical/Expressive Focus	-.40
	Student Compliance	-.74	Content Focus on Personal	-.49
	Teacher Affect	-.93	Class Affect	-.67
			Student Satisfaction	-.98
2nd Canonical	Student Competition	.73	Difficulty of Task	.58
$R = .54$	Class Dissonance	.38	Content Focus on Socialization	.42
$R^2 = .29$	Student Compliance	-.37		
Sig. = .000				
3rd Canonical	Student Compliance	-.33	Variety of Aesthetic Behaviors	.57
$R = .47$	Class Dissonance	-.52	Technical/Expressive Focus	.31
$R^2 = .22$				
Sig. = .034				

and students were seen as less compliant, more dissonant, with lower peer esteem, less decision-making power, and more involved in cliques.

The second variate (R=.54) also focused on student relationships in that higher student competition, class dissonance and lower student compliance scores were related to higher student scores for task difficulty and content focus on socialization.

Conclusions and Implications

Strongest Predictors. Four sets of variables accounted for the strongest correlations. These were Teacher Behavior, Interactions and Relationships, Curricular Content and Student Characteristics. Doyle (1978), Moos (1979) and Copeland (1980) suggested that examination of factors similar to these variables should yield insights into how classrooms function.

The relationships involving the sets of Teacher Behavior Variables and Student Learning Variables generally conform to current ideas about desirable teaching behaviors in any subject (Goodlad, 1984). Specifically, lower scores for teacher clarity, organization and knowledge of results were related to lower student satisfaction, a less focused and more difficult class content.

The results of the study also support the notion that students' perceptions of their interactions with teachers and peers are important in understanding how classrooms function (Doyle, 1978). Lower scores for desirable interactions (teacher affect, peer esteem, student decision-making and student compliance) and higher scores for undesirable interactions (student cliqueness, class dissonance and teacher favoritism) were associated with lower students satisfaction and class affect, a generally unfocused content and higher task difficulty.

The relationships that emerged for the Curricular Content and Student Learning Variables revealed a generally positive and con-

sistent correspondance between teachers' intended and students' experienced curricula. Finally, the variable loadings for the sets of Student Characteristics Variables and the Student Learning Variables showed that grade, age and sex were the strongest predictors of students' perceptions of task difficulty and satisfaction.

Revised Conceptualization. The first revision would be to modify many of the variable sets. It is possible that adding variables to the sets of Teacher Characteristics, Classroom Environment and Class Activity variables might produce significant results in future studies. Age, years of teaching experience, and attitudes toward teaching art might be added to the set of Teacher Characteristics. In light of previous research efforts (Engstrom, 1981; Moos, 1979; Ryans, 1960), however, the potential for finding strong associations between teacher characteristics and student and class variables is not as promising as it is for the other sets of variables. For example, the set of Classroom Environment Variables could be expanded to include (1) a measure of the degree to which the environment was orderly or chaotic, (2) the adequacy of the materials, equipment and facilities, and (3) the aesthetic quality of the classroom. Finally, the actual content of students' activities might prove to be a meaningful addition to the set of Class Activity variables.

While the Student Characteristics Variables were significantly associated with the Student Learning Variables, more needs to be learned about the nature of the relationships between these variables by adding students' involvement in aesthetic activities outside of school, and their postsecondary career plans. This information would help to determine the extent to which students were seriously involved in the arts. It seems likely that the serious arts students woiuld have relatively high expectations for the content of arts classes.

In addition to revising the specific variables included in the conceptual framework, it would be desirable to change the way

in which relationships were explored. The potential for investigating indirect relationships is implied in the conceptualization. The study was limited, though, in that only direct relationships were examined between each set of variables and the Student Learning Variables. Indirect relationships should be investigated in the future. While the Teacher Characteristic Variables were not found to be significantly associated with the Student Learning Variables, it is possible that teachers' characteristics could be related to their instructional behavior, which significantly related to students' perceptions of what they learned. Similarly, it is possible that the classroom environment and the class activities could be related to the interactions of students and teachers, which were also found to be significantly associated with the Student Learning Variables.

Improvement of Arts Education. The first set of suggestions to be made for the improvement of arts education are based on three sets of alterable factors that accounted for most of the variance in students' perceptions of what they learned: instructional practices; interactions and relationships; and curricular content. Since these factors are alterable and have been positively related to student achievement and satisfaction in earlier research, they should receive prominent consideration in teacher education and curriculum development for the arts. While these findings and conclusions are not new to the field of education, there has been little similar research regarding arts education.

Teachers of the arts should attempt to be clear, organized and provide meaningful feedback information about students' work. It is important, but not sufficient, for arts teachers to serve as role models of practicing artists. To function as effective teachers, they should also be good communicators and organized instructors who can offer students specific suggestions for solving their problems and furthering their artistic development. Students need to understand what is expected of them, and how to carry out their assignments. Despite the cynicism of some adolescents,

students usually respond positively when they master skills and acquire knowledge and concepts.

While teachers should possess the advanced knowledge and skills which enable them to guide their students, learning to make decisions about one's own art work is an important skill that secondary students need to acquire in order to fully participate in the aesthetic process. Results from this study and its parent project, A Study of Schooling (Goodlad, 1984) also support the notion that sharing decision-making authority with students may be an important contribution that arts teachers could make to public education. Data from A Study of Schooling revealed that while teachers in all subjects were the main decision-makers in their classes, students in arts, vocational education and physical education classes had more decision-making opportunities than they did in other classes. As limited as they may be, the opportunities given to students to learn to make decisions about their education in their precollegiate years may be concentrated in the so-called "nonacademic" subjects.

Third, the interactions and relationships between students and teachers, and among students, was another set of factors that accounted for a large proportion of variance in students' perceptions of what they learned. Arts teachers should, therefore, be sensitive to and cognizant of the types of interactions that occur in their classes. In the study, negative interactions and relationships were related to negative statements by students about what they learned. Expecially in arts classes, where sensitivity is central to the material being learned, teachers should work to see that this characteristic is preserved and extended to the realm of human relationships.

Finally, while it was encouraging that the findings of this study revealed a generally positive relationship between teachers' intended curriculum and students' perceptions of what they learned, there was one noticeable exception: aesthetic skills, knowledge and

concepts. This disturbing lack of correspondance between teachers' and students' perceptions of the extent to which aesthetic content was included in their courses suggests that arts teachers must communicate clearly with students about the content of the arts classes. Curriculum developers could facilitate this process by making sure that materials for teachers and students clearly define the domains of aesthetic skills, concepts and knowledge. We may assume that arts teachers and students understand and agree about the content of the arts, but this study suggests otherwise.

The suggestions for improving secondary arts education could be considered and adopted separately from each other. However, one aspect of the conceptualization of this study was the notion that many characteristics of teaching and learning in the arts must be considered in conjunction with each other. In utilizing the results of such research, arts educators should consider its policy implications as interelated outcomes that cannot be isolated from each other. Multivariate studies of arts education, and multifacted efforts to improve arts education, will have the greatest impact on what students learn from their secondary school classes in the visual and performing arts.

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